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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/742,801	12/20/2000	Christopher C. Ott	062891.0499	7278

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EXAMINER

SEDIGHIAN, REZA

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 09/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/742,801

Applicant(s)

OTT, CHRISTOPHER C.

Examiner

M. R. Sedighian

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3</u> . | 6) <input type="checkbox"/> Other: _____ |

1. This communication is responsive to applicant's 2/4/04 amendments in the application of OTT filed in 12/20/2000. The amendments have been entered. Claims 1-11 and 13-22 are now pending.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 9-11 and 13-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 9, it is not clear which interface is optical line interface?? Furthermore, it is not clear what it means by "... a connector for removably coupling the optical interface module to an optical interface card...". Figure 1 shows connectors 24 for connecting modules 20 to module 18. What does it mean by a connector for removably coupling?? Furthermore, connectors 24 are connecting the optical interface modules 20 to the conversion module 18, not to the optical interface card 12.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 6-8, 15, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Follett et al. (US Patent No: 4,870,637) in view of Carlson et al. (US patent No: 5,572,348).

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Regarding claims 1 and 15, Follett teaches an optical line interface assembly (11₁, 11₂, 11_N, fig. 1) for insertion in a slot of a communication rack (10, fig. 1), comprising: a board (11_i, fig. 2) having a plurality of connectors (14_i, fig. 2) each formed to couple to an optical interface module (23, 24, fig. 2), the board further having a network interface (26, fig. 2) that is coupled to a backplane of the communication rack (col. 2, lines 62-67, col. 4, lines 61-65) and a conversion module (22, fig. 2) linking the connectors and the network interface (module 22 is connected to module 26 and connectors 14_i) and operable to convert signals between an optical protocol and electrical protocol (col. 3, lines 30-57); and a plurality of optical interface modules (23₁, 23₂, 24₁, 24₂, fig. 2) each having one optical line interface (14_i, fig. 2) operable to couple to an optical signal line (37₁, 37₂, 37_K, fig. 2). Follett differs from the claimed invention in that Follett does not specifically teach the optical interface modules are removably coupled to the connectors to permit replacement of a selected one of the optical interface modules. Carlson teaches a universal demarcation point (10, fig. 1) with a plurality of optical modules (22a, 22b, fig. 1 and col. 6, lines 6-10, 20-25) that are removable (col. 4, lines 15-22). Therefore, it would have been obvious to an artisan at the time of invention to provide connectors or means for the selective removal of optical interface modules of Follett from the backplane, as such design is taught by Carlson, to easily replace and change the optical interface modules of Follett in case of damage or circuit failures. Regarding claim 15, as to determining if a selected one of the optical interface modules has failed and removing the selected module, it is obvious that when such modules does not properly operates or malfunctions, such modules may be failed and they can be removed or replaced. Furthermore, such limitations are merely depends on how the system is designed, structured, and used. When the general conditions of a claim are disclosed in the prior art, it is

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not inventive to discover the optimum or workable ranges by routine experimentation. In re Swain et al., 33 CCPA (Patents) 1250, 156 F. 2d 239, 70 USPQ 412; Minnesota Mining and Mfg. Co. V. Coe, 69 App. D.C. 217, 99 F. 2d 986, 38 USPQ 213; Allen et al. V. Coe, 77 App. D.C. 324, 135 F. 2d 11, 57 USPQ 136.

Regarding claims 6 and 20, Follett teaches the optical interface modules (23₁, 23₂, 24₁, 24₂, fig. 2) convert between optical serial bit streams and electrical serial bit streams (col. 3, lines 42-54).

Regarding claims 7 and 21, as to a failure rate of the optical interface modules being at least ten times greater than a failure rate of the conversion module, such limitations are merely depends on how the system is designed, structured, and used. When the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Swain et al., 33 CCPA (Patents) 1250, 156 F. 2d 239, 70 USPQ 412; Minnesota Mining and Mfg. Co. V. Coe, 69 App. D.C. 217, 99 F. 2d 986, 38 USPQ 213; Allen et al. V. Coe, 77 App. D.C. 324, 135 F. 2d 11, 57 USPQ 136.

Regarding claims 8 and 22, Follett teaches the optical interface modules comprises two optical line interfaces (23₁ and 24₁, fig. 2) to provide full duplex communications (col. 3, lines 34-35).

6. Claims 9 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Block et al. (US Patent No: 5,069,522) in view of Ramsey et al. (US patent No: 4,953,930).

Regarding claim 9, as it is understood in view of the above 112 problem, Block teaches an optical interface module (col. 5, lines 62-65 and 122, 123, fig. 1 and 425, fig. 4), comprising:

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one optical line interface (col. 5, lines 58-59 and 104-107, fig. 1) for coupling to an optical line (496, fig. 4); a connector (note that there are connectors for connecting the optical interface modules, such as module 425 to the module 428 that is placed on card 101) for coupling the optical interface module (122, 123, fig. 1 and 425, fig. 4) to an optical interface card (101, fig. 1); and an electrical/optical converter (425, fig. 4) operable to convert between optical signals communicated by the optical line interface and electrical signals communicated by the connector (col. 5, lines 56-65, col. 7, lines 67-68, col. 8, lines 1-3), wherein the optical line interface receives optical signals that comprise a serial bit stream and a bit-clock (col. 6, lines 25-35); and wherein the electrical/optical converter (425, fig. 4) converts the serial bit stream and the bit-clock into electrical signals (col. 6, lines 25-35) and communicates the electrical signals via the connector to a framing device (428, fig. 4) on the interface card (101, fig. 1 and col. 7, lines 45-46). Block differs from the claimed invention in that Block does not disclose conversion of electrical signal into asynchronous transfer mode (ATM) cells. Ramsey teaches a serial to parallel converter module (24, fig. 7) that provides a plurality of conventional communication interface functions, such as processing of asynchronous data for further use (col. 16, lines 25-30). Therefore, it would have been obvious to an artisan at the time of invention to incorporate a deserializer such as the one of Ramsey for the deserializer in the optical circuit card of Block in order to provide conversion of data into an ATM mode to transmit a wide range of data types.

Regarding claim 13, Block further teaches guides for the interface card (col. 6, lines 60-65).

Regarding claim 14, Block further teaches removal of the interface module if replacement is needed or desired (col. 7, lines 40-43).

7. Claims 2-3 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Follett et al. (US Patent No: 4,870,637) in view of Carlson et al. (US patent No: 5,572,348) and in further view of Block et al. (US patent No: 4,850,044).

Regarding claims 2-3 and 16-17, the modified electro-optical transmission module of Follett and Carlson differs from the claimed invention in that Follett and Carlson do not specifically disclose the board comprises a plurality of guides each operable to receive an inserted one of the optical interface modules. Follett discloses a plurality of modules (11₁, 11₂, 11_N, fig. 1) that are placed or inserted in parallel relationship on a backplane (10, fig. 1). It is obvious that in such structure, there are a plurality of guides, each being operable to receive one of the optical interface modules 11, and each module should comprise grooves corresponding to each guide. Furthermore, Block teaches a plurality of guides (12, fig. 1) that each is operable to receive an inserted one of optical interface modules (15, fig. 1). Therefore, it would have been obvious to provide guides in the backplane, as it is taught by Block, to insert and place respective optical interface modules. As to claims 3 and 17, clock further teaches each of the guides comprises guide slots (col. 4, lines 60-68, col. 5, lines 1-6).

8. Claims 4 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Follett et al. (US Patent No: 4,870,637) in view of Carlson et al. (US patent No: 5,572,348) and in further view of Follingstad et al. (US Patent No: 6,345,986).

Regarding claims 4 and 18, the modified electro-optical transmission module of Follett and Carlson differs from the claimed invention in that Follett and Carlson do not disclose the connectors are nine-pin D-subminiature connectors. Follingstad teaches nine-pin D-subminiature

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connectors (col. 8, lines 26-30 and figs 13A-D). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate pin D-subminiature connectors such as the ones of Follingstad for the connectors in the modified opto-electric module of Follett and Carlson in order to provide connectors with durable design.

9. Claims 5 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Follett et al. (US Patent No: 4,870,637) in view of Carlson et al. (US patent No: 5,572,348) and in further view of Weir (US Patent No: 6,570,982).

Regarding claims 5 and 19, the modified electro-optical transmission module of Follett and Carlson differs from the claimed invention in that Follett and Carlson do not disclose PCMCIA connectors. Weir teaches a printed circuit board with a mounted module and PCMCIA connectors (col. 6, lines 8-10). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate PCMCIA connectors such as the ones of Weir for the connectors in the modified opto-electric module of Follett and Carlson to benefit from the low cost standard components and to permit the communication with other components.

10. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Block et al. (US Patent No: 5,069,522) in view of Ramsey et al. (US patent No: 4,953,930) and in further view of Follingstad et al. (US Patent No: 6,345,986).

Regarding claim 10, Block further teaches electrical connectors (col. 7, lines 51-52). The modified electro-optical module of Block and Ramsey differs from the claimed invention in that Block and Ramsey do not specifically disclose the connectors are nine-pin D-subminiature

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connectors. Follingstad teaches nine-pin D-subminiature connectors (col. 8, lines 26-30 and figs 13A-D). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate pin D-subminiature connectors such as the ones of Follingstad for the connectors in the modified opto-electric module of Block and Ramsey in order to provide connectors with durable design.

11. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Block et al. (US Patent No: 5,069,522) in view of Ramsey et al. (US patent No: 4,953,930) and in further view of Weir (US Patent No: 6,570,982).

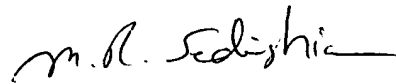
Regarding claim 11, Block further teaches electrical connectors (col. 7, lines 51-52). The modified electro-optical transmission module of Block and Ramsey differs from the claimed invention in that Block and Ramsey do not disclose PCMCIA connectors. Weir teaches a printed circuit board with a mounted module and PCMCIA connectors (col. 6, lines 8-10). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate PCMCIA connectors such as the ones of Weir for the connectors in the modified opto-electric module of Block and Ramsey in order to benefit from the low cost standard components and to permit the communication with other components.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (571) 272-3034. The examiner can normally be reached on M-F (from 9 AM to 5 PM).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


M. R. SEDIGHIAN
PRIMARY EXAMINER